1026-05-208   **Christina MD Zamfirescu*** (`zamfichris@gmail.com`), Department of Computer Science,Hunter College, 695 Park Avenue, New York, NY 10021. *Transformations on Digraphs as Intersection Digraphs - New Results.* Preliminary report.

The concept of intersection digraph has been introduced independently by Beineke and Christina Zamfirescu in 1982, and by Sen, Das, Roy and West in 1989.

Transformations on digraphs, such as the line, the middle, the total, and the subdivision digraph of a digraph D are all representable as intersection digraphs of families of ordered pairs of sets containing only elements of the vertex set and of the arc set of the original digraph D. This gives us a uniform way of treating all these transformed digraphs using the intersection digraph as a tool, where the only necessary symbols are elements of the original digraph.

We optimize such a representation by minimizing the size of the set of symbols used by the intersection digraph realizing it. To do so, we used the concept of intersection number, introduced by Erdos, Goodman and Posa for graphs, and generalized for digraphs by Sen, Das, Roy and West.

We shall present new results we obtained in this area, and describe how our results may help in measuring complexity. (Received February 27, 2007)

1